

CLAIMS

1. A computer system comprising:
 - a special-purpose register file adapted for holding memory address calculation information received from memory, said special-purpose register file having at least one dedicated interface for allowing efficient transfer of memory address calculation information in relation to said special-purpose register file;
 - means for determining a memory address in response to memory address calculation information received from said special-purpose register file, thus enabling a corresponding memory access.
2. The computer system according to claim 1, further comprising means for effectuating a memory access based on the determined memory address.
3. The computer system according to claim 1, wherein said at least one dedicated interface comprises a dedicated interface between said special-purpose register file and memory.
4. The computer system according to claim 1, wherein said at least one dedicated interface comprises a dedicated interface between said special-purpose register file and said means for determining a memory address.
5. The computer system according to claim 1, wherein said at least one dedicated interface includes a dedicated data path adapted in width to said memory address calculation information.
6. The computer system according to claim 1, wherein said memory comprises a dedicated cache adapted for said memory address calculation information.

7. The computer system according to claim 1, wherein said means for determining a memory address comprises at least one functional processor unit.

8. The computer system according to claim 7, wherein a forwarding data path is arranged from an output bus associated with said at least one functional processor unit to an input bus associated with said at least one functional processor unit.

9. The computer system according to claim 1, wherein said means for determining a memory address is operable for executing special-purpose instructions in order to determine said memory address.

10. The computer system according to claim 1, further comprising means for executing special-purpose load instructions in order to load said memory address calculation information from said memory to said special-purpose register file.

11. The computer system according to claim 10, wherein said means for executing special-purpose load instructions comprises at least one functional processor unit.

12. The computer system according to claim 11, wherein a forwarding data path is arranged from said memory to an input bus associated with said at least one functional processor unit for allowing direct transfer of memory address calculation information from said memory to said at least one functional processor unit.

13. The computer system according to claim 1, wherein said memory address calculation information is in the form of implicit memory access information.

14. The computer system according to claim 13, wherein said implicit memory access information includes memory address translation information.

15. A computer system comprising:

- a dedicated cache adapted for holding memory access information;
- a special-purpose register file adapted for holding memory access information received from said dedicated cache over a first dedicated interface; and
- 5 - means for determining a memory address in response to memory access information received from said special-purpose register file over a second dedicated interface; and
- means for effectuating a corresponding memory access based on the determined memory address.

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16. The computer system according to claim 15, wherein said first and second dedicated interfaces are adapted in width to said memory address calculation information.

15 17. A system for handling memory address calculation information, said system comprising:

- a special-purpose register file adapted for holding memory address calculation information received from memory, said special-purpose register file having at least one dedicated interface for allowing efficient transfer of memory address calculation information in relation to said special-purpose register file;
- 20 - means for determining a memory address in response to memory address calculation information received from said special-purpose register file, thus enabling a corresponding memory access.

25 18. The system according to claim 17, further comprising means for effectuating a memory access based on the determined memory address.

19. The system according to claim 17, wherein said at least one dedicated interface comprises a dedicated interface between said special-purpose register file and
30 memory.

20. The system according to claim 17, wherein said at least one dedicated interface comprises a dedicated interface between said special-purpose register file and said means for determining a memory address.

5 21. The system according to claim 17, wherein said at least one dedicated interface includes a dedicated data path adapted in width to said memory address calculation information.

22. The system according to claim 17, wherein said memory comprises a dedicated
10 cache adapted for said memory address calculation information.
